



Release Notes for Avaya Ethernet Routing Switch 3500 Series

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NN47203-400
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Chapter 1: Introduction

Purpose

This document describes new features, hardware, upgrade alerts, known and resolved issues, and limitations for Avaya Ethernet Routing Switch 3500 Series, in this software release.

Related Resources

Documentation

See *Documentation Reference for Avaya Ethernet Routing Switch 3500 Series*, NN47203-101 for a list of the documentation for this product.

For more information about new features of the switch and important information about the latest release, see *Release Notes for Avaya Ethernet Routing Switch 3500 Series*, NN47203-400.

For more information about how to configure security, see *Configuring Security on Avaya Ethernet Routing Switch 3500 Series*, NN47203-504.

For the current documentation, see the Avaya Support website: www.avaya.com/support.

Training

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Enter the course code in the **Search** field and click **Go** to search for the course.

Course code	Course title
8D00020E	Stackable ERS and VSP Products Virtual Campus Offering

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About this task

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Procedure

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 - In **Search**, type the product name. On the Search Results page, select **Video** in the **Content Type** column on the left.
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Before you begin

- Download the documentation collection zip file to your local computer.
- You must have Adobe Acrobat or Adobe Reader installed on your computer.

Procedure

1. Extract the document collection zip file into a folder.
2. Navigate to the folder that contains the extracted files and open the file named `<product_name_release>.pdx`.

3. In the Search dialog box, select the option **In the index named <product_name_release>.pdx**.
4. Enter a search word or phrase.
5. Select any of the following to narrow your search:
 - Whole Words Only
 - Case-Sensitive
 - Include Bookmarks
 - Include Comments
6. Click **Search**.

The search results show the number of documents and instances found. You can sort the search results by Relevance Ranking, Date Modified, Filename, or Location. The default is Relevance Ranking.

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About this task

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Procedure

1. In an Internet browser, go to <https://support.avaya.com>.
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3. Under **My Information**, select **SSO login Profile**.
4. Click **E-NOTIFICATIONS**.
5. In the GENERAL NOTIFICATIONS area, select the required documentation types, and then click **UPDATE**.

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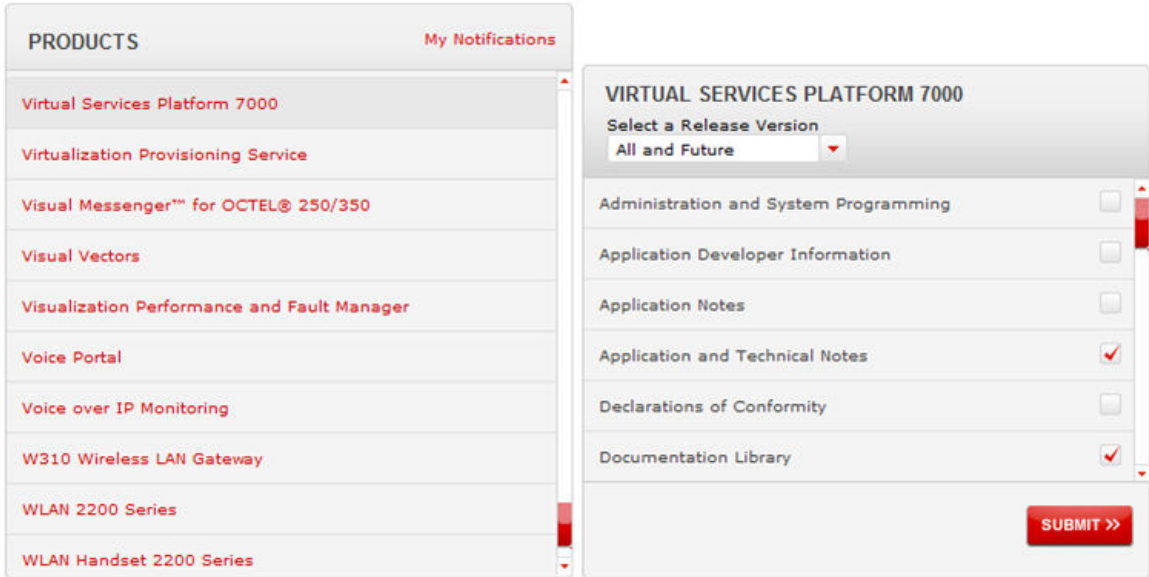
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6. Click **OK**.
7. In the **PRODUCT NOTIFICATIONS** area, click **Add More Products**.

PRODUCT NOTIFICATIONS Add More Products

Show Details **1 Notices**

8. Scroll through the list, and then select the product name.
9. Select a release version.
10. Select the check box next to the required documentation types.



11. Click **Submit**.

Support

Go to the Avaya Support website at <http://support.avaya.com> for the most up-to-date documentation, product notices, and knowledge articles. You can also search for release notes, downloads, and resolutions to issues. Use the online service request system to create a service request. Chat with live agents to get answers to questions, or request an agent to connect you to a support team if an issue requires additional expertise.

Chapter 2: New in this release

New in this release

The following sections detail what is new in *Release Notes for Avaya Ethernet Routing Switch 3500 Series*, NN47203-400 for Release 5.3.1.

These Release Notes are a supplement to the technical documentation and, in some cases, may supersede information contained in them.

Features

See the following sections for information about new features in ERS 3500 series.

Fabric Attach

Fabric Attach (FA) extends the fabric edge to devices that do not support Shortest Path Bridging MAC (SPBM). With FA, non-SPBM devices can take advantage of full SPBM support, when support is available.

FA also decreases the configuration requirements on SPBM devices by off-loading some configuration to the attached non-SPBM devices and by automating certain configuration steps that occur most often.

The Fabric Attach support is limited to the Fabric Attach Standalone Proxy function.

ACL I commands

This feature introduces the following ACL I commands:

- fa authentication-key
- default fa authentication-key
- extended-logging
- no extended-logging
- fa message-authentication
- default fa message-authentication
- no fa message-authentication
- fa port-enable
- default fa port-enable

New in this release

- no fa port-enable
- fa proxy
- default fa proxy
- no fa proxy
- fa standalone-proxy
- default fa standalond-proxy
- no fa standalone-proxy
- fa timeout
- default fa timeout
- fa uplink
- no fa uplink
- fa vlan
- no fa vlan
- default fa vlan
- fa zero-touch
- no fa zero-touch
- default fa zero-touch
- fa zero-touch-options
- no fa zero-touch-options
- default fa zero-touch-options
- show fa agent
- show fa elements
- show fa port-enable
- show fa interface
- show fa uplink
- show fa vlan
- show fa zero-touch-options

For more information about the Fabric Attach feature, see *Configuring Fabric Attach on Avaya Ethernet Routing Switch 3500 Series*, NN47203-505.

Block subsequent MAC authentication

The administrator can either use the current implementation or a separate option to block subsequent MAC authentications if the RADIUS-assigned VLAN is different than the first authorized station's VLAN.

This feature introduces the ACLI command:

- eapol multihost block-different-radius-assigned-vlan

For more information, see *Configuring Security on Avaya Ethernet Routing Switch 3500 Series*, NN47203-504.

Default all EAP settings

The `default eap-all` command resets all the EAP settings globally and for each port.

The global command defaults the following settings:

- EAP state
- Fail Open VLAN
- VoIP VLAN
- all Multihost settings
- MultiVLAN
- Guest VLAN settings

Per interface command defaults the following:

- All EAP standard related settings
- All multihost settings
- Guest VLAN settings

Note:

Per interface command can be used on all ports or only on a desired range of ports.

For more information, see *Configuring Security on Avaya Ethernet Routing Switch 3500 Series*, NN47203-504.

CLI command `eapol multihost mac-max`

The `eapol multihost mac-max` command restricts the maximum number of EAP and NEAP clients allowed for each port.

For more information, see *Configuring Security on Avaya Ethernet Routing Switch 3500 Series*, NN47203-504.

Multiple Hosts with Multiple VLANs

The Multiple Hosts with Multiple VLANs (MHMV) feature allows you to assign multiple authenticated devices to different VLANs on the same EAP-enabled or non-EAP-enabled port using device MAC addresses.

The feature introduces the new ACLI command:

- `eapol multihost multivlan enable`

For more information, see *Configuring Security on Avaya Ethernet Routing Switch 3500 Series*, NN47203-504.

MHSA No-Limit

The MHSA No-Limit feature accommodates the scenario when an access point is connected to the switch. Only the access point performs authentication. The hosts connected behind the access point access the network without any authentication.

For information, see *Configuring Security on Avaya Ethernet Routing Switch 3500 Series*, NN47203-504.

NEAP Not Member of VLAN

The NEAP Not Member of VLAN feature ensures that ports configured with RADIUS Non-EAP authentication are assigned to at least one VLAN to make authentication possible for Non-EAP clients.

For more information, see *Configuring Security on Avaya Ethernet Routing Switch 3500 Series*, NN47203-504.

Manual MDI/X

A Medium Dependent Interface (MDI) describes the interface (both physical and electrical) in a computer network from a physical layer implementation to the physical medium used to carry the transmission. Ethernet over twisted pair also defines a medium dependent interface crossover (MDI-X) interface. Auto MDI-X ports on newer network interfaces detect if the connection would require a crossover, and automatically chooses the MDI or MDI/X configuration to properly match the other end of the link.

When auto-MDI/X is active, straight or crossover Cat5 cables can provide connection to a port. If autonegotiation is disabled, auto-MDI/X is not active.

This feature allows you to configure the MDI/X setting for copper Ethernet ports using a new ACLI command, `mdi x` from the Interface Configuration mode.

For more information, see *Getting Started with Avaya Ethernet Routing Switch 3500 Series*, NN47203-301.

NEAP IP Phone support enhancement

NEAP IP Phone support is enhanced to recognize the following Avaya handset models through DHCP signature: 9611G, 9621,9641,9610, 9620L,9620C, 9630G,9650G.

Other changes

See the following sections for information about changes that are not feature-related.

Added support for SFP+ ports:

The following 10G bi-directional SFP+ ports are now supported:

- AA1403169–E6 10GB-BX-U 1270 nm
- AA1403170–E6 10GB-BX-D 1330 nm

SSL disabled

SSL is disabled in Release 5.3.1. The ERS 3500 5.3.1 agent supports TLS versions 1.0, 1.1, and 1.2.

Chapter 3: Important notices

This section provides important software and hardware related notices.

File names

The following table describes the Avaya Ethernet Routing Switch 3500 Series, Software Release 5.3.1, software files.

Module or file type	Description	File name	File size (bytes)
Standard (non-SSH) runtime image	Standard software image for the Avaya Ethernet Routing Switch 3500 Series	3500_531002.img	9,505,236
Secure (SSH) runtime image	Standard software image for the Avaya Ethernet Routing Switch 3500 Series	3500_531003s.img	9,774,324
Diagnostic software version 5.3.0.6	Diagnostic software for the Avaya Ethernet Routing Switch 3500 Series	3500_53006_diag.bin	2,090,269
MIB definition files	Management Information Base (MIB) definition files	Ethernet_Routing_Switch_35xx_MIBs_5.3.1.zip	1,937,383
EDM Help file zip	A downloadable zip file containing Help information for Enterprise Device Manager (EDM)	ers3500v531_HELP_EDM.zip	2,701,660
COM Plug in file zip	COM Plug in for Enterprise Device Manager (EDM)	ers3500v5.3.1.0.zip	4,052,252

Upgrading the Diag image using ACLI

Perform the following procedure to upgrade the Diag image using ACLI.

Procedure

1. Connect a default switch to a TFTP server.
2. Set a valid IP address and subnet mask.
3. Configure the TFTP server address using the following command from Privileged EXEC mode:

```
tftp-server <A.B.C.D>
```

4. Verify the connection to the TFTP Server.
5. At the command prompt, enter the **download** command with the following parameters.

```
download diag <WORD>
```

The Diag image is downloaded and then the switch is rebooted. To avoid rebooting the switch after the download, add the option *<no-reset>* to the **download** command.

Variable definitions

The following table describes the parameters for the **download** command.

Variable	Value
<A.B.C.D>	Enter the IP address of the TFTP server in the format XXX.XXX.XXX.XXX
<WORD>	The filename of the diagnostic image

Updating the Bootloader image from the Boot menu

Bootloader is the program that loads the hardware after a power-up or reset. The hardware cannot boot up with an incompatible version of Bootloader. Right version of the Bootloader is required to ensure that the units do not lock up when the system comes out of a power reset.

* Note:

ERS 3510GT/3524GT/3526T that initially has 5.0 code must be updated, otherwise, you do not need to upgrade the Bootloader.

Use the following procedure to update the Bootloader image from the Boot menu.

Procedure

1. Connect the power cord to the unit and plug in to AC power.

2. Wait for the Avaya Diagnostics screen to start the Diagnostic test and enter `Cntrl-C`.

```
Dianostic Version 1.0.0.15 Thu Sept 9 13:58:15 2015
Press Control-C to Enter Diag

Test ROM Config          - PASSED
Test FANs                - PASSED
Test Internal Loopback   - PASSED

>> Break Recognized - Wait...

Press 'a' to run Agent code
Press 'd' to download Agent code
Press 'e' to display errors
Press 'i' to initialize config flash
Press 'p' to run POST tests
Press 'r' to reset the box
```

3. Press `'d'`.
4. Choose option: 3- Bootloader.
5. Choose option: 1 - Download via TFTP.
6. Enter the filename, along with its extension.
7. Enter the TFTP server IP address.
8. Enter the switch IP address.
9. Enter the subnet mask.
10. Enter the port in which the cable is connected.
The download of the DIAG image begins.
11. Press `'y'` to program flash when prompted after download.
12. Once the download and programming completes, you can either additionally download the Diags or Agent image, or press `'y'` to reboot the switch.

Updating the Diag image from the Boot menu

Use this procedure to update the Diagnostics image from the Boot menu.

Procedure

1. Connect a default switch to a TFTP server.
2. Reboot the switch (either a soft or hard reset).
3. During the boot process, press `CTRL+C` until the following menu is displayed:
 - a. Press `'a'` to run Agent code.
 - b. Press `'d'` to download the agent/diag/bootloader code.
 - c. Press `'e'` to display Errors.

- d. Press 'i' to initialize config flash.
 - e. Press 'p' to run POST tests.
 - f. Press 'r' to reset the switch.
4. Press 'd'.
 5. Choose option: 2 - Diagnostics.
 6. Choose option: 1 - Download via TFTP.
 7. Enter the filename, along with its extension; for example 3500_53006_diag.bin
 8. Enter the TFTP server IP address.
 9. Enter the switch IP address.
 10. Enter the subnet mask.
 11. Enter the port in which the cable is connected.
- The download of the DIAG image begins.

Supported software and hardware capabilities

The following table summarizes the known capabilities for the Avaya Ethernet Routing Switch 3500 Series software.

Table 1: Supported capabilities for the Avaya Ethernet Routing Switch 3500 Series

Feature	Maximum number supported
QoS egress queues	4
QoS filters per precedence	256
QoS precedence	4
Total QoS filters	(4 x 256) = 1024
MAC addresses	16000
Layer 2	
VLANs	256
Spanning Tree Groups in STPG and RSTP modes	1
Multiple Spanning Tree Instances (MSTI) in MSTP mode	8
MultiLink Trunking (MLT), Link Aggregation (LAG) groups	6
Links for each MLT or LAG	4
Layer 3	
ARP entries (local, static & dynamic)	512 (of which 32 are reserved for local ARPs)

Table continues...

Feature	Maximum number supported
Local ARP Entries (local IP interfaces)	32
Static ARP entries	256
Dynamic ARP entries	max 480 (shares 480 entries with dynamic ARPs)
IPv4 route entries (local, static & dynamic)	32 local + 32 static + 0 dynamic
Static routes and Non-local Static routes	32
Local routes	32
Management routes	4
UDP Forwarding entries	128
DHCP relay entries	256
DHCP relay forward paths	256
DHCP Server Pools	16 (one per VLAN)
DHCP Server clients per pool	256
DHCP Server clients per switch/stack	2000
Miscellaneous	
802.1X EAP scaling (clients for each port)	32
ADAC (IP Phones)	16
Jumbo frame support	9 K bytes
IGMP multicast groups	up to 59
802.1X (EAP) clients per port, running in MHMA	32
802.1X (EAP) clients per switch	384
LLDP Neighbors	160 on ERS 3510GT 416 on ERS 3524GT 448 on ERS 3526T 816 on ERS 3549GTS 816 on ERS 3550T
RMON alarms	400
RMON events	400
RMON Ethernet statistics	128 per unit
RMON Ethernet history	196 per unit

Supported standards RFCs and MIBs

Standards

The standards in the following list are supported on the switch:

- IEEE 802.1AB (Link Layer Discovery Protocol (LLDP) and LLDP-Media Endpoint Discover (LLDP-MED))
- IEEE 802.1Q (VLANs)
- IEEE 802.1p (Priority Queues)
- IEEE 802.1D (Spanning Tree)
- IEEE 802.1w (Rapid Spanning Tree)
- IEEE 802.1s (Multiple Spanning Tree Groups)
- IEEE 802.1X (Extensible Authentication Protocol (EAP))
- IEEE 802.3 (10BASE-T/100BASE-TX)
- IEEE 802.3u (100BASE-T (ANSI) Auto-Negotiation)
- IEEE 802.3x (Pause Frames / Flow Control)
- IEEE 802.3z (1000BASE-X)
- IEEE 802.3ab (1000BASE-T)
- IEEE 802.3ad (Link Aggregation Control Protocol (LACP))
- IEEE 802.3aq (10GBASE-LRM 10 Gbit/s Ethernet over fiber)
- IEEE 802.3at (Power over Ethernet plus— PoE+ (32W))

RFCs and MIBs

For more information about networking concepts, protocols, and topologies, consult the following RFCs and MIBs:

- RFC 783 Trivial File Transfer Protocol (TFTP)
- RFC 791/ 950 Internet Protocol (IP)
- RFC 792 Internet Control Message Protocol (ICMP)
- RFC 826 Address Resolution Protocol (ARP)
- RFC 854 Telnet Server and Client
- RFC 951/ 1542 (BOOTP)
- RFC 1112 Internet Group Management Protocol v1 (IGMPv1)
- RFC 1213 MIB-II
- RFC 1215 SNMP Traps Definition

Important notices

- RFC 1271 / 1757 / 2819 RMON
- RFC 1361 / 1769 Simple Network Time Protocol (SNTP)
- RFC 1493 (Bridge MIB)
- RFC 1573 / 2863 Interface MIB
- RFC 1643 / 2665 Ethernet MIB
- RFC 1905 / 3416 SNMP
- RFC 1906 / 3417 SNMP Transport Mappings
- RFC 1907 / 3418 SNMP MIB
- RFC 1945 HTTP v1.0
- RFC 1981 Path MTU Discovery for IPv6
- RFC 2011 SNMP v2 MIB for IP
- RFC 2012 SNMP v2 MIB for TCP
- RFC 2013 SNMP v2 MIB for UDP
- RFC 2131 DHCP Client
- RFC 2132 DHCP Options 6, 43 & 60
- RFC 2138 RADIUS
- RFC 2236 Internet Group Management Protocol v2 (IGMPv2)
- RFC 2460 Internet Protocol v6 (IPv6) Specification
- RFC 2461 Neighbor Discovery for IPv6
- RFC 2462 Auto-configuration of link local addresses
- RFC 2464 Ipv6 over Ethernet
- RFC 2474 Differentiated Services Support
- RFC 2570 / 3410 SNMPv3
- RFC 2571 / 3411 SNMP Frameworks
- RFC 2572 / 3412 SNMP Message Processing
- RFC 2573 / 3413 SNMPv3 Applications
- RFC 2574 / 3414 SNMPv3 USM
- RFC 2575 / 3415 SNMPv3 VACM
- RFC 2576 / 3584 Co-existence of SNMP v1/v2/v3
- RFC 2616 HTTP
- RFC 2660 HTTPS (Secure Web)
- RFC 2665 Ethernet MIB
- RFC 2674 Q-Bridge MIB

- RFC 2737 Entity MIBv2
- RFC 2819 RMON MIB
- RFC 2863 Interfaces Group MIB
- RFC 2866 RADIUS Accounting
- RFC 2869 RADIUS Extensions (interim updates)
- RFC 3046 (& 5010) DHCP option 82, Relay Agent Information Option
- RFC 3058 RADIUS Authentication
- RFC 3361 DHCP option 120 SIP Servers
- RFC 3376 Internet Group Management Protocol v3 (IGMPv3)
- RFC 3484 Default Address Selection for IPv6
- RFC 3576 RADIUS Change of Authorization
- RFC 3596 DNS Extensions for IPv6
- RFC 3879 Deprecating Site Local Addresses
- RFC 4007 Scoped Address Architecture
- RFC 4022 MIB for TCP
- RFC 4113 MIB for UDP
- RFC 4193 Unique Local IPv6 Unicast Addresses
- RFC 4252 SSH
- RFC 4291 IPv6 Addressing Architecture
- RFC 4293 MIB for IP
- RFC 4301 Security Architecture for the Internet Protocol
- RFC 4432 SSHv2 RSA
- RFC 4443 Internet Control Message Protocol (ICMPv6) Update to RFC 2463
- RFC 4675 RADIUS Attributes for VLAN and Priority Support
- RFC 4861 Neighbor Discovery for IPv6
- RFC 4862 IPv6 Stateless Address Autoconfig
- RFC 5095 Deprecation of Type 0 Routing Headers in IPv6
- RFC 5859 TFTP Server DHCP option

Chapter 4: Resolved issues

Use the information in this section to learn more about issues that have been resolved in this release.

Resolved issues

The following table lists the issues resolved in the current software release.

Reference number	Description
ERS3500-214	MAC address are not learned for the ports, with ports being UP
ERS3500-266	ERS 3500 loosing LACP port configuration after every reboot
ERS3500-339	When RAV is same as FOV, the RAV is not assigned to the port
ERS3500-351	ERS 3500: lldp tx-tlv configurations are being added into running config after switch reboot, causing IP Phone not to work
ERS454800-861	Switch does not recognize LLDP request from device to provide additional power support KEM connected to the Cisco IP Phone or on some Pan Tilt Zoom cameras

Chapter 5: Known issues and limitations

Use the information in this section to learn more about known issues and limitations.

Where appropriate, use workarounds provided for the known issues.

Known issues

The following table lists and describes known issues and limitations for Avaya Ethernet Routing Switch 3500 Series. Where available and appropriate, workarounds are provided.

For known issues prior to this release, see previous release notes available from the Avaya Support web site: www.avaya.com/support.

Reference number	Description
For Release 5.3.1	
ERS3500–293	LLDP: Vendor specific avaya TLVs are set to false state after upgrade from 5.3.0.005 to 5.3.1.x
ERS3500–296	IGMP-EDM: undefined lines are continuously incremented in Groups-Ext tab when version v3 is configured and v1/v2
ERS3500–305	EDM: EAPOL block-different-radius-assigned-vlan option is not available in EDM - EAP Tab - inconsistency between CLI
ERS3500–346	After setting the duplex parameter on all ports, speed is randomly set on ports
ERS3500–347	MDIX command is not available in EDM, there is an inconsistency between CLI and EDM
ERS3500–348	MDIX ForceAuto inconsistency appears after speed configuration
ERS3500–349	EDM: SSHC DsaKeySize range values should be modified to <1024-3072> - inconsistency with CLI
ERS3500–353	MDIX setting does not automatically change to normal after setting the duplex parameter
ERS3500–354	Flowcontrol activates on random ports when setting duplex to full
ERS3500–374	EDM: STP - SpanningTreeBpduFilterIgnoreSelf should be implemented in EDM - inconsistency with CLI
ERS3500–375	IGMP-EDM: Inconsistency between CLI & EDM regarding last IGMPv3 entry when sending max number of groups

Table continues...

Known issues and limitations

Reference number	Description
ERS3500–377	EAP settings configured through FA Zero Touch are present in running config even after port is shut down
ERS3500–380	EDM:IPv6 Addresses Tab - Insert option is not active by default
ERS3500–381	In CLI should show the following message: "% Could not set custom MDIX on a port with enabled auto-negotiation" only